



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,305	01/04/2006	Takeshi Watase	282051US0PCT	8356
22850 7590 07/21/2011 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER DUCHENEAUX, FRANK D				
ART UNIT 1788		PAPER NUMBER		
NOTIFICATION DATE 07/21/2011		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Attachment to Advisory Action

Response to Arguments

1. Applicant's arguments, see pages 16-17 of the remarks filed 6/29/2011, with respect to the rejections of claims 1, 4 and 5 under 35 U.S.C. 112, 2nd paragraph as set forth in paragraphs 6-9 of the action mailed 3/31/2011, have been fully considered but they are not persuasive.

The Examiner notes that the recitation of "the total content of the electrically conductive additive and the magnetic powder in the magnetic coating film is 60 % or less" provides for a magnetic coating that contains none (0 %) of either or both of the claimed additive and magnetic powder, which is contradiction to the 20 to 40 mass % concurrently claimed for the said additive and said powder.

Thus, the Examiner disagrees with the Applicants' contention that it would have been reasonably understood that the total content of 60 % or less would include the 20 to 40 mass % limitations, especially given that the specification provides recitations of the total content having a range that at least partially falls outside all the possible combinations of the 20 to 40 mass % limitations for each of the additive and the powder (see the sentence bridging pages 11-12 and the Example in Tables 1 and 2).

Therefore, it is unclear, and thus indefinite, from the claim limitations and in light of the present disclosure what the Applicants are claiming as their invention.

2. Applicant's arguments, see pages 12-16 of the remarks filed 6/29/2011, with respect to the rejections of **claims 1, 4, 7-8 and 11-13 and 14-15** under 35 U.S.C. 112, 1st paragraph as set

forth in paragraph 4 of the action mailed 3/31/2011, have been fully considered but they are not persuasive.

The Applicants' assertions that the Examiner's findings are erroneous are due to the Applicants' misinterpretation of the present specification at the paragraph bridging pages 29-30. It is noted that the range of 20 to 40 % is first disclosed on page 11, line 24 and then again in the second line of the paragraph bridging pages 29-30; both of which refer exclusively to the amount of the electrically conductive additive.

It is also noted that the last sentence in said bridging paragraph reciting "On the contrary, in a case of using the magnetic metal powder for the magnetic powder, since it has electrical conductivity of itself, it is preferably added in an amount as less as possible (for example 30% or less) within the range described above (20 to 40 %)" (emphasis by Examiner), discloses that the first recited "it" refers to the magnetic metal powder, while the second recited "it" refers back to the electrically conductive additive as evidenced by the fact that the 20 to 40 % range previously recited refer exclusively to the ranges of the additive and not to the magnetic metal powder. Thus, the skilled artisan would not have understood that the magnetic metal powder having electrical conductivity itself is added in an amount of 20 to 30 % as presently argued.

In the second paragraph of page 30, cited by the Applicants' current arguments, a clear distinction is made between the disclosed ranges depending on whether the electrically conductive additive is combined with a soft magnetic ferrite powder or a magnetic metal powder. Clearly, this paragraph does not disclose said additive in amounts presently recited in current claims 1, 5, 7, 11 and 14 when used in combination with the magnetic metal powder.

Thus, contrary to the Applicants' assertions and cited case law, the currently disputed range limitation(s) is not supported by the specification with reasonable clarity given that the specification clearly discloses that the electrically conductive additive is "preferably added in an amount as less as possible" when combined with the magnetic metal powder.

In regards to the examples, cited by the Applicants in support of their arguments, it is noted that Examples 15-24, wherein permalloy is present in an amount of 20 to 40 mass %, contains the electrically conductive additive in an amount of 0, 10 and 20 mass %, which does not support the presently claimed range for the electrically conductive additive when used in combination with permalloy. Indeed, the said examples provide evidence of the disclosed ranges presented in the second paragraph of page 30.

In regards to the issue of the presently claimed and presently disputed thickness range and the new matter rejections against the same, it is noted that, original claim 1 requires a thickness of 3 to 50 μm , but does not require an electrically conductive additive, while current claims 1 and 5 require the conductive filler, but also require the thickness to be, not 3 to 50 μm , but 3 to 15 μm .

Also, the specification at page 64, cited by the Applicants, is directed to a black coating film, the definition of which begins at line 2 of page 63, wherein it is noted that the black coating film does not contain the magnetic powder and is not directed to the magnetic coating film, which is the film whose thickness range is presently in dispute.

Finally, it is noted that the last paragraph on page 11 teaches that film thickness is 3 to 15 μm when the electrically conductive additive is added towards maintaining good electrical

conductivity, in agreement with the interpretation of originally filed claims 1 and 5 set forth above.

Thus, the skilled artisan, upon reading the specific portions of the present disclosure, and taking the disclosure as whole, would have been apprised that the Applicants' invention is directed to a magnetic coating film that has a thickness range of from 3 to 15 μm when said film contains the presently claimed electrically conductive additive to provide a film having good electrical conductivity.

Thus, Applicants' arguments with respect to the new matter rejections as set forth in the previous action are not persuasive and the said rejections are maintained.

3. Applicant's arguments, see pages 18-22 of the remarks filed 6/29/2011, with respect to the rejections of **claims 1 and 4** and **claims 7-8** over Watase et al. in view of Hosoe et al. under 35 U.S.C. 103(a) set forth respectively in paragraphs 12 and 13 of the action mailed 3/31/2011, and the rejections of **claims 11-13** and **claims 14-15** over Watase et al. in view of Hosoe et al. and in further view of Nakao et al. under 35 U.S.C. 103(a) set forth respectively in paragraphs 14 and 15 of the action mailed 3/31/2011, have been fully considered but they are not persuasive.

The Applicants argue against the Examiner's conclusion of obviousness of the combination of the Watase and Hosoe references as one of ordinary skill in the art would not have been lead to add Hosoe's fine magnetic permalloy particles to the heat dissipating coating of Watase, or conversely, to add 10 to 50 % of the electrically conductive material and heat dissipating filler of Watase to the EM shielding coating of Hosoe.

The Applicants claim that the Examiner's conclusion is inconsistent with the disclosure and design of Hosoe given that Hosoe instructs the importance of employing metal powders of a very small particle size when dispersing the fine EM materials in a resin in order to densify the metal powder towards a desired shielding effect.

From the Hosoe disclosure, it is the Applicant's position that Hosoe would have taught the skilled artisan that further additives (heat conductive, electrically conductive and carbon black fillers) which promote aggregation of the permalloy particles and decrease the uniformity and density of the dispersion, is not desirable; and that the addition of the permalloy particles to the invention of Watase - or conversely, the addition of the filler particles added to the Hosoe coatings - would preclude the uniform, high density dispersion of Hosoe's fine permalloy particles and thus no useful EM shielding function could be achieved.

In summary, the Applicants allege, via numerous citations of previous rulings, that the skilled artisan would have not had sufficient motivation to combine the prior art references in a manner set forth by the Examiner in the disputed prior art rejections, and that said artisan would not have reasonably expected the success of the present invention.

In response, the Examiner respectfully disagrees with Applicants' arguments as the analogous Hosoe reference was employed to remedy the deficiencies of the Watase reference as set forth in the prior art rejections, while the converse, the employment of Watase to teach the deficiencies of Hosoe, was not postured in said rejections.

It is noted that, while Hosoe does not disclose all the features of the present claimed invention, Hosoe is used as teaching reference, and therefore, it is not necessary for this

secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely alloy products such as permalloy and products applying said powders such as magnetic shielding materials, and in combination with the primary reference, discloses the presently claimed invention.

Also, it is noted that the "test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference... Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art", *In re Keller*, 642 F.2d 413, 208 USPQ 871, 881 (CCPA 1981) and that "combining the teachings of references does not involve an ability to combine their specific structures", *In re Nievelt*, 482 F.2d 965, 179 USP 224, 226 (CCPA).

In addition, the Examiner respectfully notes that the Watase invention is directed for use with, and incorporation into, devices of an electronic nature, of which the skilled artisan at the time of the invention would have certainly contemplated the benefits of any EM wave shielding considerations.

Applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Hosoe, and its combination with Watase is,

therefore, a reasonably pertinent reference, because it teaches EM wave shielding materials, which is a function especially pertinent to the invention at hand.

Indeed, based upon the delicacy of circuitry designed to be incorporated in tandem with an invention employing the coated substrates of Watase, and the potential for damage to said circuitry from surrounding EM radiation, the skilled artisan would actually be irresponsible not to contemplate the benefits of including the EM shielding material of Hosoe into the disclosed invention of Watase.

Further, as stated above in the prior art rejections, not only does Hosoe provide the currently claimed EM shielding materials, but Hosoe also discusses the advantages and disadvantages of adding the disclosed material in certain weight percents based upon desired properties, which would have been clear to one of ordinary skill in the art, and in combination with the Watase reference, teaches the presently claimed invention.

The Applicants are reminded that MPEP 2144 specifically instructs that “The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be **reasoned from knowledge generally available to one of ordinary skill in the art**, established scientific principles, or legal precedent established by prior case law. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (setting forth test for implicit teachings); *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); *Ex parte Clapp*,

227 USPQ 972 (Bd. Pat. App. & Inter. 1985) (examiner must present convincing line of reasoning supporting rejection); and *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning). (emphasis by Examiner)

Finally, it is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the Examiner’s position that the arguments provided by the Applicants regarding adverse affects to the EM shielding capabilities of the Hosoe permalloy particles incorporated into the invention of Watase must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001.”

The Applicants also argue against the combination of the Nakao reference with the Watase and Hosoe references given that Nakao is not concerned with coatings directed to heat dissipation, electrical conductivity and EM shielding, and seem to be inconsistent with the addition of carbon black.

The Applicants appear to suggest that the presently claimed composite as taught by the three prior art references requires a degree of skill/knowledge beyond that of one of ordinary skill in the art.

The Examiner respectfully directs the Applicants’ attention to the case law provided above in regards to the combination of prior art references and notes that Nakao was employed to

teach forming films with improved properties such as surface gloss, smoothness, chipping resistance and the like formed of, *inter alia*, a white coating comprising a white pigment and a titanium dioxide pigment, which said coating can be coated on a plastic substrate.

Thus, it would not be outside the purview of one of ordinary skill to contemplate applying a coating such as that of Nakao, which provides the benefits cited, over the critical coatings taught by the Watase/Hosoe references towards providing protection from, *inter alia*, chipping and the like to the underlying said critical coatings as such layered structures are not outside the scope the skilled artisan familiar with the inventions of Watase and Hosoe.

4. Applicant's arguments, see pages 22-26 of the remarks filed 6/29/2011, with respect to the rejections of **claim 5** and **claim 22** over Watase et al. in view of Nagano et al. under 35 U.S.C. 103(a) set forth respectively in paragraphs 16 and 17 of the action mailed 3/31/2011, and the rejections of **claim 23** and **claim 24** over Watase et al. in view of Nagano et al. and in further view of Nakao et al. under 35 U.S.C. 103(a) set forth respectively in paragraphs 18 and 19 of the action mailed 3/31/2011, have been fully considered but they are not persuasive.

The Applicants express confusion over the Examiner's reference to the deficiencies of the Watase reference as being silent to a total content of the electrically conductive additive and the magnetic powder is from 30 to 60 mass%.

The Applicants then argue that the Examiner has erred in citing the *Titanium* case law towards a showing that a *prima facie* case of obviousness exists with Nagano's teaching of less than 20 parts by weight of an electrically conductive material, and that the Nagano reference

does not share an endpoint with the present claims as Nagano teaches an electrically conductive powder in amount of less than 20 mass % while the current claim requires 20 to 40 mass%.

The Applicants believe that the *Tanaka Decision* provides precedent for the Applicants' arguments in that said Decision ruled against an examiner's citation of the *Titanium* case law given that the prior art specifically warned against having a carbon content above that recited in the appealed claims.

In response to the Examiner's alleged refusal to accept the Board's decision in *Tanaka* given the lack of criticality of the presently claimed mass % of the electrically conductive additive, the Applicants submit that the range of 20 to 40 mass% is disclosed thorough out the present specification as being preferred.

Moreover, the Applicants argue that the issue of criticality is irrelevant to a conclusion of obviousness of the claimed subject matter given that Nagano requires less than 20 mass % while the current claims require at least 20 mass %.

The Applicants finally argue that a lack disclosure in Watase to add substantial amounts of carbon black, or additional teachings in Nakao to provide an additional layer of white pigment over Watase's heat dissipating layer, undermines Nagano's requirement that the total amount of carbon, metal powder and electrically conductive metal oxide be less than 20 parts by weight per 100 parts by weight of binder.

The Examiner notes that the "30 to 60 mass%" in the rejection of claim 5 as set forth on page 16 of the action mailed 3/31/2011 was in error and should have been recorded as "...and the

magnetic powder is from 0 to 60 mass %" as required by the claim limitation of the present invention.

In rebuttal, the Examiner notes the following: (1) Watase clearly teaches a conductive filler in an amount of 10 to 50 % as set forth in paragraphs 16-19 of the previous action, which in combination with Nagano, teaches well above the presently claimed lower limit of 20 mass %; (2) one interpretation of current claim 5 provides 40 mass % of a magnetic powder, 20 mass % of an electrically conductive additive and a total content of both in an amount of 60 % or less, which said "60 % or less" interpretation would require that the conductive additive be present in an amount of 20 mass % or less, which overlaps that as taught by Nagano alone; (3) current claims 22-24 do not require a total content of both an electrically conductive additive and a magnetic powder in an amount of 60 % or less.

With respect to claim 5, Nagano was employed as a secondary reference to teach the "60 % or less" deficiency as well as the "soft magnetic ferrite powder" deficiency of the current claim, and that while the Nagano reference alone provides a conductive filler in amounts that fall just short of the presently claimed lower limit, Watase/Nagano provide such a filler in amounts overlapping that presently claimed, and as set forth above, one interpretation of the present claim, wherein the conductive filler is in an amount of less than 20 mass%, Nagano alone teaches the presently claimed amount of the presently claimed additive in dispute.

Thus, one of ordinary skill in the art would have been apprised from the disclosure of Watase and Nagano, to select a conductive filler such as Ni as taught by Watase and/or a metal powder as taught by Nagano in amounts that overlap that presently claimed to provide the effect of the conductive filler while maintaining appropriate workability, and to further select an

amount of soft magnetic ferrite in an amount identical to that of current claim 5 to provide electromagnetic wave absorption based on an intended use.

In regards to the Applicants' continued arguments against the Examiner's employment of *Titanium* as provided by the *Tanaka* Decision, it remains the Examiner's position that criticality of the claimed range has not been established.

Finally, in regards to the Applicants' final arguments, it is unclear what is meant by there is "No teaching in Watase to add substantial amounts carbon black" as Watase was clearly cited as teaching carbon in an amount greater than 3%; thus, it is equally unclear what the Applicants intended for the Nagano invention to be "undermined" as Nagano only states that at least one of carbon, metal powder and electrically conductive metal oxide, which discloses that carbon is not required, and Nagano also does not state that the carbon is indeed carbon black. It is further unclear how the Nakao disclosure undermines the Nakano reference. Clarification is requested.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANK D. DUCHENEAUX whose telephone number is (571)270-7053. The examiner can normally be reached on M-Th, 7:30 A.M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alicia A. Chevalier can be reached on (571)272-1490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/
Supervisory Patent Examiner, Art Unit 1788

/F. D. D./
Frank D. Ducheneaux
Examiner, Art Unit 1788
7/15/2011